

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DAVID F. CRADDOCK, CHARLES SCOTT GRAHAM, IAN  
DAVID JUDD, VIVEK KASHYAP, RENATO JOHN RECIO, and LEE  
ANTON SENDELBACH

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Appeal 2007-0375  
Application 09/886,186  
Technology Center 2100

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Decided: April 30, 2007

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Before JAMES D. THOMAS, HOWARD B. BLANKENSHIP, and JAY P.  
LUCAS, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-42, the only claims pending in this application. We have jurisdiction under 35 U.S.C. §§ 6(b), 134(a).

## INTRODUCTION

The claims are directed to passing data on a system area network (SAN). The invention utilizes data in an InfiniBand (IB) protocol that is passed to an Internet Protocol (IP) router attached to an external network that utilizes an IP networking protocol. Claim 1 is illustrative:

1. A method of transmitting data packets from a system area network device to an external network device, comprising:

passing data generated by a host process to a host channel adapter that utilizes an InfiniBand (IB) protocol as its networking protocol for data communications; and

passing the data from the host channel adapter directly to an Internet Protocol (IP) router that uses IP as its networking protocol for data communications, the router being connected directly to the host channel adapter, the router also being coupled to an external network that utilizes IP as its networking protocol for data communications.

The Examiner relies on the following prior art references to show unpatentability:

Karpoff	US 2001/0049740 A1	Dec. 6, 2001
Acharya	US 6,459,698 B1	Oct. 1, 2002
Pettey	US 2004/0128398 A1	Jul. 1, 2004

The rejections as presented by the Examiner are as follows:

1. Claims 1-25, 27-31, 33-37, and 39-42 are rejected under 35 U.S.C § 103(a) as unpatentable over Acharya and Pettey.
2. Claims 26, 32, and 38 are rejected under 35 U.S.C § 103(a) as unpatentable over Acharya, Pettey, and Karpoff.

## OPINION

In response to the § 103(a) rejection of the claims over Acharya and Pettey, Appellants contend that the references do not describe passing data from the host channel adapter directly to an Internet Protocol router or the router being connected directly to the host channel adapter, as required by representative claim 1.

The rejection relies on Acharya for the teaching. Acharya describes a “conventional” network having the InfiniBand™ Architecture Specification (Fig. 1). Host channel adapters (HCAs) 12 provide computing node 11a with an interface connection to the network 10. Further, target channel adapters (TCAs) 14 provide the destination target nodes 11b and 11c with an interface connection to the network. Acharya col. 1, l. 12 - col. 2, l. 9. Acharya recognizes the problem that when a data packet is sent from a TCP/IP network to an InfiniBand™ network, the IP priorities of the packet are not retained. Col. 2, ll. 10-14.

In Acharya’s system, router 20 serves as an interface between the IP and the InfiniBand™ network domain, as depicted in Figure 4. Router 20 contains software for generating a mapping table for bridging between domains. Col. 7, l. 49 - col. 8, l. 21; Fig. 3.

Appellants argue, however, that Acharya’s system does not teach passing data directly from a host channel adapter to an Internet Protocol (IP) router. According to Appellants, the router of Acharya includes the host channel adapter within the router itself. As such, data cannot be passed from the host channel adapter to the router because the host channel adapter is part of the router, in Appellants’ view.

Router 20 contains HCA 90 (Fig. 4). However, as noted in the first sentence of Acharya's Abstract, the router is *configured for sending and receiving data packets on an InfiniBand™ network*, in addition to its function of serving as a bridge between an IP network and the InfiniBand™ network. In Acharya's system, router 20 (Figs. 1, 4) communicates with HCA 12 (Figs. 1, 2) via switch 12 (Fig. 1). HCA 12 receives data from a CPU (e.g., Fig 1; ref. 16) and communicates over the network in accordance with the InfiniBand™ Architecture Specification. Col. 4, ll. 4-13; col. 7, ll. 6-16.

Host channel adapter 12 of Acharya thus passes data to IP router 20. Representative claim 1 further requires, however, that the router be "connected directly" to the host channel adapter. According to Appellants' Brief (at 6), the router being "connected directly" to the host channel adapter is described at Specification page 4, lines 3 through 17 and page 35, lines 21 through 27.

In light of Appellants' Specification, a "direct" connection does not preclude a switch between the host channel adapter and the IP router. Moreover, even if we compare disclosure to disclosure, we note the similarities between instant Figure 1 (HCA 124 connected to IP router 117 via switch 114) and Acharya's Figure 1 (HCA 12 connected to IP router 20 via switch 22).

We have considered all of Appellants' arguments but are not persuaded that representative claim 1 has been rejected in error. We sustain the rejection of claims 1-25, 27-31, 33-37, and 39-42 under 35 U.S.C § 103(a) as unpatentable over Acharya and Pettey.

In response to the second ground of rejection, Appellants rely on the same arguments that we find unpersuasive relating to the alleged deficient teachings of Acharya and Pettey. Appellants further contend that Karpoff “does not teach passing data from the host channel adapter directly to an Internet Protocol router or the router being connected directly to the host channel adapter.” (Br. 13.) We agree that Karpoff does not contain the teaching, but Acharya does. As such, we are not persuaded that claims 26, 32, and 38 have been rejected in error. We sustain the § 103(a) rejection of the claims as unpatentable over Acharya, Pettey, and Karpoff.

#### CONCLUSION

In summary, we affirm the rejection of claims 1-42 under 35 U.S.C § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

#### AFFIRMED

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